Probability and Statistics Review Name:

January 5, 2010

1. Imagine putting the letters *a, b, c, d* into a hat, and then drawing two of them in succession. How many groupings are possible? List them.
2. In the same situation as #1, imagine pulling all four letters out of a hat. How many groups are possible? List them.
3. There are four students, and you need to make a group of three. How many groups are possible? List them. Remember ABC is the same as BCA in this situation - it is still the same three people!
4. You have five shirts, but you will take with you only three for your vacation. In how many different ways can you do this? List them.
5. Of all possible outcomes on tossing a coin six times, how many of them will have heads 4 times?

For the following, assume a normal deck of cards and a normal dice. What is the probability of each of the following?

1. Drawing a six from a deck of cards?
2. Drawing three cards that are all queen from a deck of cards?
3. Drawing a black card from a deck of cards?
4. Rolling an odd number on a die?
5. Drawing a three from a deck of cards?
6. Drawing a club from a deck of cards?
7. Drawing two cards that are both eights from a deck of cards?
8. Drawing a heart from a deck of cards?
9. Drawing a seven from a deck of cards?
10. Drawing two cards that are both twos from a deck of cards?
11. Rolling an even number on a die?
12. Drawing three cards that are all nines from a deck of cards?
13. Drawing a red card from a deck of cards?
14. Rolling a six on a die?
15. Drawing a five from a deck of cards?